

Rosie

Rosie Build Pictures



Testing SuperMicro CSE-PTJBOD-CB2 Jbod Power Board and Power Supply. This power board switches the power supply on when power is applied. It also provides fan power and LED headers. The power board was eventually moved into the left drive bay.



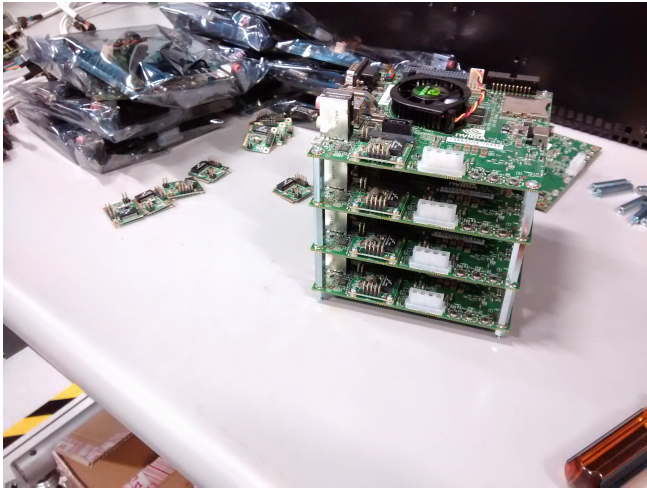
Bare Rosewill chassis with only the power supply installed.



Unpacking and testing out how standoffs will work.



More parts unpacked. Small mPCIe cards are Syba SD-MPE24031 GbE NICs. The white pigtails are 10-pin to 8P8C (RJ45) adapters that came with the Syba cards. We ended up not using the pigtails, and the Syba cards while installed are not cabled.



First stack of 4 Jetson Tegra TK1 boards put together. Syba mPCIe cards installed.



All 4 stacks Jetson Tegra TK1 assembled.



Powered up two stacks using custom power cables. Mocking up where the remaining two stacks of Jetson Tegra TK1 boards will be located.



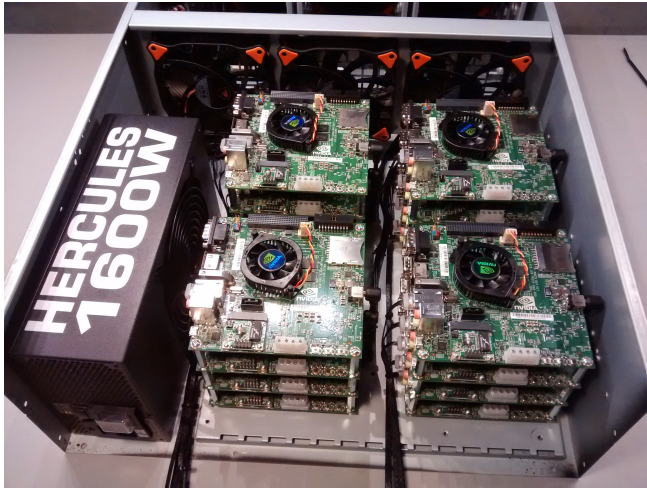
5.5mm DC Barrel pigtails used to create custom DC Barrel to 8-pin PCIe-style Mollex 12v cables.



Closeup of custom 8-pin Mollex PCIe to DC-barrel 12v power cables.



First time powering up all 16 boards via the custom power cables.



Ultra-thin Cat6 cables bundled and routed out of the chassis. Rear panel of the chassis is removed to allow for easier cable routing.



System racked in a JLSE rack.



Back of racked chassis showing all 16 Cat6 cable managed and plugged into a Brocade ICX6610. System powered up.



Closeup through back panel of chassis. Shows some weather stripping that was used to remove the sharp edges where the Cat6 leaves the chassis.

Rosie Parts List

Item	Description	Mfg Part #	Qty	Notes
Jetson TK1 Development Kit		940-7R375-0001-000	16	https://developer.nvidia.com/jetson-tk1
Rosewill RSV-L4500 Chassis		RSV-L4500	1	
Rosewill RSV-R26LX 26" 3-sections Ball Bearing Sliding Rail Kit		RSV-R26LX	1	
Rosewill HERCULES-1600 1600W ATX Power Supply		HERCULES-1600	1	1600W is overkill for this project.
SuperMicro CSE-PTJBOD-CB2 Jbod Power Board		CSE-PTJBOD-CB2	1	
COUGAR CF-V12HPB Vortex Hydro-Dynamic-Bearing (Fluid) 300,000 Hours 12CM Silent Cooling Fan with Pulse Width Modulation (Black)		CF-V12HPB	6	Chassis comes with fans, but have 4-pin Mollex power connectors.
Silverstone CPF02 11.81" 300mm (100mm/100mm/100mm) Black Sleeved One-to-Three PWM Fan Splitter		CPF02	2	JBOD Power Board only has two fan headers, splitters needed to power all the fans.
Syba SD-MPE24031 Gigabit Ethernet Card		SD-MPE24031	16	Installed but not wired
Video Products Inc. CAT6 Ultra Super Flat Cables - 5 ft		CAT6-USF-5-BLACK	16	http://www.vpi.us/cable-usf-cat6.html

Mollex CONN TERM SOCKET 18-20AWG GOLD	Pins for 8-pin receptacle	0460181541	32	Digi-Key Part # WM6276CT-ND
Mollex CONN RECEPT 8POS DUAL	8-pin (2x4) Mini-Fit Jr 5557 Series - Receptacle	0039012080	8	Digi-Key Part # WM3703-ND
Tensility CBL ASSY M R/A 2.1MM 6' 18 AWG	DC Barrel 2.1mm ID, 5.5mm OD Pigtail	10-01065	16	Digi-Key Part # 839-1167-ND
Mollex TOOL HAND CRIMP 16-24AWG		0638190900	1	Digi-Key Part # WM9026-ND , crimper for Mollex connectors.
McMaster-Carr Hex Locknut, 4-40 Thread Size, 1/4" Width, 9/64" Height, pack of 100		90631A005	1	Used to secure back of standoffs to motherboard tray
McMaster-Carr Pan Head Phillips Machine Screw, 2-56 Thread, 3/16" Length, packs of 100		90272A076	1	Used to secure Syba mPCIe card
McMaster-Carr SAE Flat Washer, Number 2 Screw Size, 7/32" OD, .01"-.03" Thick, packs of 100		90126A501	1	Spacer between mPCIe card and standoffs on Jetson board, 8-pin header through holes on Syba mPCIe are too long.
McMaster-Carr Male--Female Thread Hex Standoff, 1/4" Hex, 1/4" Length, 4-40 Screw Size		93620A905	16	Standoffs between bottom Jetson board and motherboard tray.
McMaster-Carr Male--Female Thread Hex Standoff, 1/4" Hex, 1-1/4" Length, 4-40 Screw Size		93620A940	48	Standoffs between Jetson boards in 4 high stacks.
McMaster-Carr Pan Head Phillips Machine Screw, 4-40 Thread, 3/16" Length, packs of 100		90272A105	1	Screws to attach the top Jetson board in the stack.